
क्लैम्प टाइप हस्त चालित मिन्सर —
विशिष्टि

(पहला पुनरीक्षण)

Clamp Type Hand Operated Mincer
— Specification

(First Revision)

ICS 97.040.60

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भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110002
www.bis.gov.in www.standardsbis.in

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Utensils, Cutlery and Domestic Hardware Sectional Committee had been approved by the Mechanical Engineering Division Council.

This standard was first published in 1973. The present revision has been taken up to incorporate the modifications found necessary as a result of experience gained on the use of this standard. Also, in this revision, the standard has been brought into the latest style and format of Indian Standard, and references to Indian Standards, wherever applicable have been updated. The BIS certification marking clause has been modified to align with the revised *Bureau of Indian Standards Act*, 2016. The following major modifications have been incorporated in this revision of the standard:

- a) Scope has been modified; and
- b) Provision of new material (stainless steel) has been added.

The relevant SI units and corresponding conversion factors are given below for guidance:

$$\begin{aligned} 1 \text{ kgf/cm}^2 &= 98.066 5 \text{ kPa (kilopascal)} = 10 \text{ m of water column (WC)} \\ &= 0.098 066 5 \text{ MPa (megapascal)} \\ &= 0.980 665 \text{ bar} \\ 1 \text{ Pa} &= 1 \text{ N/m}^2 \end{aligned}$$

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***CLAMP TYPE HAND OPERATED MINCER — SPECIFICATION***(First Revision)***1 SCOPE**

This standard prescribes requirements for clamp type hand operated mincer, meant for mincing meat, vegetable, etc.

2 REFERENCES

The standards given below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards:

<i>IS No.</i>	<i>Title</i>
IS 4777 : 1968	Performance tests for protective schemes used in protection of light gauge steel against corrosion
IS 6911 : 2017	Stainless steel plate, sheet and strip — Specification (<i>second revision</i>)

3 MATERIAL**3.1 Body, Feed Worm, Securing Ring and Crank**

The material for the body, feed worm, securing ring and crank shall be of cast iron or cast steel or stainless

steel (grade 304 LN and 304 N).

3.2 Knife

The knife shall be made of cast steel having a hardness of 500 HV to 600 HV when taken at 6 mm from cutting edge or stainless steel of grades 304 LN or 304 N as per IS 6911. In case of case-hardened steel, the minimum depth of the case shall be 0.6 mm.

3.3 Perforated Plate

The perforated plate shall be made of cast steel having a hardness of 500 HV to 600 HV when taken anywhere between perforations or stainless steel of grades 304 LN or N as per IS 6911.

3.4 Hand Grip

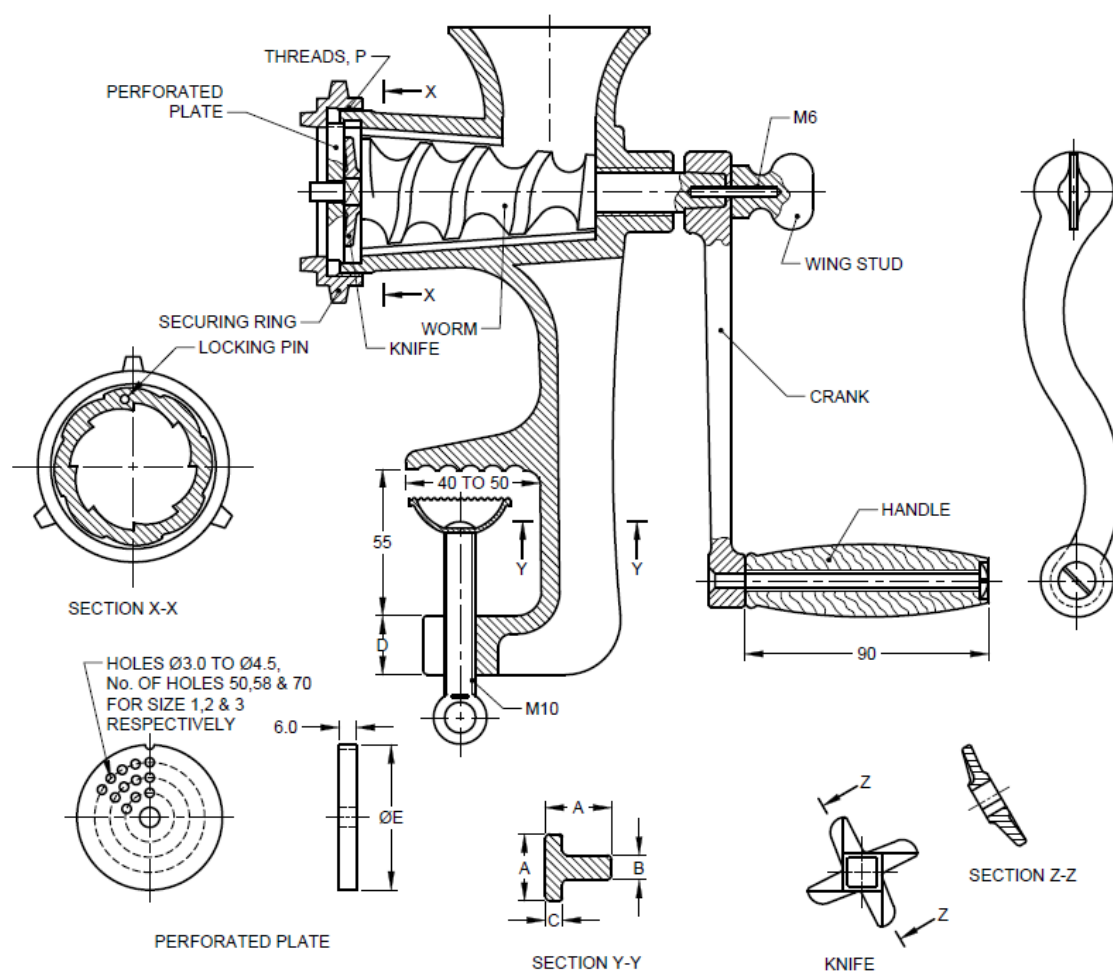
The hand grip shall be made of any suitable wood well-seasoned and free from centre heart, decay, checks, shakes, splits, holes, warp and any defect likely to affect the utility of the components.

3.5 Clamp Screw

The hand grip shall be made of mild steel or stainless steel.

4 SHAPE AND DIMENSIONS

The typical shape of mincer is shown in Fig 1.



Sl No.	Size	A	B	C	D	ØE	Threads P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	1	25	10	7	28	53	M60 × 3
ii)	2	27	10	7	35	57	M64 × 3
iii)	3	30	12	8	42	64	M72 × 3

All dimensions in millimetres.

FIG. 1 MINCER, HAND OPERATED, CLAMP TYPE, TYPICAL

5 CONSTRUCTION

5.1 Body

The body shall be cast in one piece. The interior of the body shall be fluted or corrugated to work in conjunction with worm to deliver the stuff to knife. The front end of the body shall be suitably threaded to accommodate securing ring. The inner edge at the front shall shave a steel pin to engage into the corresponding groove in the perforated plate to prevent it from turning. Alternatively, the perforated plate may have a tooth to engage into the corresponding groove at the inner edge of the body.

5.2 Feed Worm

It shall be cast in one piece. The edges of spirals shall be ground to sharp square edge and to effect relatively close fit in relation to walls of body. The front end shall be tapped and fitted with hardened steel removable stud having a squared portion to accommodate the knife. The handle end of the worm shall be tapered for passing through the back end of the mincer body and squared or otherwise shaped to accommodate the crank. The handle end may be tapped to receive a wing stud for clamping the crank in position.

5.3 Knife

The knife shall have a minimum of four sharpened cutting blades. The blades shall be ground sharp on one side for cutting against the perforated plate. The square hole of correct size shall properly fit the stud of the worm.

5.4 Perforated Plate

The plate shall fit properly into end of the body. It shall not rotate while mincing. The face of plate adjacent to knife shall be ground flat and smooth. Extra plates with 6 mm or 10 mm holes may also be supplied when specifically asked by the purchaser.

5.5 Securing Ring

The ring shall be internally threaded for screwing it to the mincer body. The outside periphery shall have projections or studs to provide means for gripping for removal and tightening.

5.6 Crank

The crank shall be cast in one piece. It shall be flattened on sides and shall have a shaped hole to tightly wedge on to taper shank of worm. It shall be held securely with the worm by thumb screw or wing nut.

6 WORKMANSHIP AND FINISH

6.1 The casting shall be free from porosity, blow holes, hard spots and other harmful defects. It shall be well dressed and fettled and shall be readily machinable.

6.2 All surfaces of the body, worm, securing ring, crank and thumb screw or wing nut except threaded portions and machined surfaces shall be tin coated by hot dip tinning process. The knife and perforated

plate shall have a good finish. The hand grip shall be lacquered.

7 TESTS

7.1 Performance Test

The mincer shall be capable of satisfactorily mincing meat or vegetable, leaving minimum material remaining in the body.

7.2 Accelerated Salt Spray Test

The sample mincer shall be tested for accelerated salt spray test, in accordance with Section II of IS 4777. It shall satisfy the requirements given at Section IV therein.

8 MARKING

8.1 It shall be marked with the manufacturer's name, initials or registered trade-mark and an arrow mark near the hub of the body showing the direction of rotation of crank handle.

8.2 Each mincer shall be provided with an instruction sheet giving directions for use and maintenance to the user.

8.3 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark

9 PACKING

The packing requirements shall be as agreed between the purchaser and the supplier.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Utensils, Cutlery and Domestic Hardware Sectional Committee, MED 33

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity (A-504, K.G. Chandra Vista, OMR, Opposite to Satyabhama University, Sholinganallur, Chennai)	SHRI G. SHANMUGANATHAN (Chairperson)
Aligarh Locks Manufacturers and Traders Association, Aligarh	SHRI P. L. SHIROMANI SHRI DHRUV MISHRA (<i>Alternate</i>)
Anna Aluminium Company Pvt Ltd, Kizhakkambalam	SHRI K. CHANDRASHEKRAN PILLAI SHRI V. THULASIDHARAN (<i>Alternate</i>)
Butterfly Gandhimati Appliances Pvt Ltd, Chennai	SHRI K. SHANMUGAVELU SHRI A. BASKAR (<i>Alternate</i>)
Central Public Works Department, New Delhi	SHRI SURINDER KUMAR SHRI R. K. SARASWAT (<i>Alternate</i>)
Consumer Voice, New Delhi	SHRI B. K. MUKHOPADHYAY SHRI M. A. U. KHAN (<i>Alternate</i>)
CSIR - Central Electrochemical Research Institute, Karaikudi	DR S. VASUDHEVAN DR S. MURALIDHARAN (<i>Alternate</i>)
CSIR - National Metallurgical Laboratory, Jamshedpur	DR GOPI KISHOR MANDAL DR HIMADRI BAR (<i>Alternate</i>)
D. P. Garg and Company Pvt Ltd, Noida	SHRI S. M. GARG
Delhi Test House, New Delhi	SHRI DINESH GOEL SHRI ROHIT GOEL (<i>Alternate</i>)
Directorate General Quality Assurance, Ministry of Defence, Kanpur	SHRI M. SATYANARAYANA
Federation of Hardware Manufacturing and Traders Welfare Association, Gurgaon	SHRI TAKSHAY BANSAL SHRI NAVEEN HANDA (<i>Alternate I</i>) SHRI VIKAS NARWAL (<i>Alternate II</i>)
Godrej and Boyce Manufacturing Company Ltd, Mumbai	SHRI KSHITU R. GAIKAR SHRI VINAYAK G. NALGIRKAR (<i>Alternate</i>)
Hamilton Housewares Pvt Ltd, Mumbai	SHRI SANJAY MORESHWAR MHATRE SHRI INDUPRAKASH SINGH (<i>Alternate I</i>) SHRI VIKAS SURENDRA KUMAR BHATIA (<i>Alternate II</i>)
Hawkins Cookers Ltd, Thane	SHRI RAJESH SHARMA SHRI RAVINDRA MALI (<i>Alternate I</i>) SHRI SANJAY SASIKUMAR (<i>Alternate II</i>)
Hindalco Industries Ltd, Sonbhadra, Mumbai	SHRI DEVESH KUMAR SHRI ATUL GUPTA (<i>Alternate</i>)

<i>Organization</i>	<i>Representative(s)</i>
Indian Stainless Steel Development Association, Gurugram	SHRI ROHIT KUMAR SHRI KARAN KUMAR PAHUJA
Jindal Stainless Ltd, Hisar	SHRI BISWABASU ROY SHRIMATI NISHA GOEL (<i>Alternate</i>)
Office of Development Commissioner (MSME), New Delhi	SHRI SUVANKAR SANTRA
Pritam International, New Delhi	SHRI RAHUL KHERA SHRI ROHIT KHERA (<i>Alternate</i>)
Royal Kitchen Appliances Pvt Ltd, Sonipat	SHRI SURESH AGARWAL
Sat Rattan Engineering Works, New Delhi	SHRI G. L. KHERA
Shriram Institute for Industrial Research, New Delhi	SHRI ALOK KUMAR SHRI ANEESH KUMAR (<i>Alternate I</i>) SHRI PUNEET KAPOOR (<i>Alternate II</i>)
Steel Authority of India Limited (SAIL), Salem Steel Plant, Salem	SHRI L. SIVAKUMAR SHRI SUNIL KUMAR MURATHIA (<i>Alternate</i>)
TTK Prestige Ltd, Bengaluru	SHRI ANTO VIMAL ANAND SHRI S. RAJASEKARAN (<i>Alternate</i>)
In Personal Capacity (179, Sri Sai, 13th Cross, Ananthnagar Phase 1, Electronic City Post, Bengaluru)	SHRI B. VISWANATH SHENOY
BIS Directorate General	SHRI NAVINDRA GAUTAM SCIENTIST 'E'/DIRECTOR AND HEAD (MECHANICAL ENGINEERING) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary
SHRI LOKRAJ MEENA
SCIENTIST 'B'/ASSISTANT DIRECTOR
(MECHANICAL ENGINEERING), BIS

Bureau of Indian Standards

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This Indian Standard has been developed from Doc No.: MED 33 (20796).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002

Telephones: 2323 0131, 2323 3375, 2323 9402

Website: www.bis.gov.in

Regional Offices:

	Telephones
Central : 601/A, Konnectus Tower -1, 6 th Floor, DMRC Building, Bhavbhuti Marg, New Delhi 110002	{ 2323 7617
Eastern : 8 th Floor, Plot No 7/7 & 7/8, CP Block, Sector V, Salt Lake, Kolkata, West Bengal 700091	{ 2367 0012 2320 9474
Northern : Plot No. 4-A, Sector 27-B, Madhya Marg, Chandigarh 160019	{ 265 9930
Southern : C.I.T. Campus, IV Cross Road, Taramani, Chennai 600113	{ 2254 1442 2254 1216
Western : Plot No. E-9, Road No.-8, MIDC, Andheri (East), Mumbai 400093	{ 2821 8093

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